section having a tapered trailing edge and comprising at least one chamber, with at least one chamber including an evaporator capillary wick attached to its internal surfaces and an evaporator vapor space adjacent to the evaporator capillary wick, and a portion of the evaporator capillary wick extending into the tapered trailing edge of the vane;

a condenser section comprising a condenser enclosure separate from the stator vane and in communication with the vane, with external portions of the condenser enclosure exposed to air cooler than the gases to which the vane is exposed, the condenser section including a condenser capillary wick attached to the internal surfaces of the condenser enclosure portions exposed to the cooler air and a condenser vapor space within the condenser enclosure and adjacent to the condenser capillary wick, with the condenser vapor space in communication with the evaporator vapor space; and

at least one capillary artery extending between the evaporator section and the condenser section and embedded within the evaporator capillary wick and the condenser capillary wick, for moving liquid from the condenser capillary wick to the evaporator capillary wick.

2. The heat pipe of claim **1** wherein the evaporator capillary wick is powdered metal wick.

3. The heat pipe of claim **1** wherein the portion of the evaporator capillary wick extending into the tapered trailing edge of the vane is a screen wick in contact with the remaining evaporator capillary wick and exposed to the evaporator vapor space.

4. The heat pipe of claim **1** wherein the evaporator section includes at least a leading edge chamber and a trailing edge chamber separated and defined by at least one structural rib and each chamber contains a part of the evaporator wick.

5. The heat pipe of claim **4** further including a capillary artery connecting parts of the evaporator wick.

6. The heat pipe of claim **4** further including a capillary connection wick connecting parts of the evaporator wick.

7. The heat pipe of claim **1** wherein an adiabatic section is attached between the condenser enclosure and the vane and serves as a communication means between the condenser vapor space and the evaporator vapor space, and at least one capillary artery passes through the adiabatic section.

8. The heat pipe of claim **1** wherein at least one capillary artery comprises a tube artery.

9. The heat pipe of claim **1** wherein at least one capillary artery comprises a cable artery.

10. The heat pipe of claim **1** wherein a capillary artery comprises a cable artery and a portion of the cable artery outside the evaporator section and the condenser section is enclosed within a sheath.

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